

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A hardening processing apparatus for heating a substrate coated with a coating solution to harden a coating film on the substrate, comprising:

a first processing chamber for mounting the substrate coated with the coating solution on a heating plate and heating the substrate to a predetermined temperature on a one-by-one basis;

a first irradiation unit provided in said first processing chamber, for irradiating the substrate mounted on said heating plate with ultraviolet light; [[and]]

a second processing chamber connected in a communicating manner to said first processing chamber, for mounting the substrate coated with the coating solution on a temperature adjusting plate and adjusting the substrate to a temperature lower than a processing temperature of hardening processing on a one-by-one basis; and

a second irradiation unit provided in said second processing chamber for irradiating the substrate mounted on said temperature adjusting plate with ultraviolet light having a wavelength different from that of said first irradiation unit.

Claim 2 (Original): The hardening processing apparatus as set forth in claim 1, wherein

the substrate is heated by said heating plate while being irradiated with the ultraviolet light by said first irradiation unit so that the coating film on the substrate is hardened.

Claim 3 (Original): The hardening processing apparatus as set forth in claim 1, wherein

said temperature adjusting plate is movable between a position above said heating plate in said first processing chamber and said second processing chamber.

Claim 4 (Cancelled).

Claim 5 (Cancelled).

Claim 6 (Original): The hardening processing apparatus as set forth in claim 1, further comprising:

a control section for performing, in said first processing chamber:

heating processing of mounting the substrate coated with the coating solution on said heating plate and heating the substrate at a first temperature; and

hardening processing of subsequently heating the substrate, for which the heating processing has been performed, kept mounted on said heating plate at a temperature of the hardening processing that is higher than the first temperature, and irradiating the substrate with the ultraviolet light to harden the coating film on the substrate.

Claim 7 (Original): The hardening processing apparatus as set forth in claim 1, further comprising:

a control section for performing:

heating processing of mounting the substrate coated with the coating solution on said temperature adjusting plate and heating the substrate at a first temperature in said second processing chamber; and

hardening processing of mounting the substrate, for which the heating processing has been performed, on said heating plate and heating the substrate at a temperature of the

hardening processing that is higher than the first temperature, and irradiating the substrate with the ultraviolet light to harden the coating film on the substrate in said first processing chamber.

Claim 8 (Cancelled).

Claim 9 (Cancelled).

Claim 10 (Original): The hardening processing apparatus as set forth in claim 1, further comprising:

an inert gas supply unit for supplying an inert gas to said first processing chamber and said second processing chamber; and an exhaust unit for exhausting said first processing chamber and said second processing chamber.

Claim 11 (Original): The hardening processing apparatus as set forth in claim 1, wherein

the coating film is an insulating film, and the ultraviolet light applied from said first irradiation unit to the substrate is ultraviolet light having a wavelength of 300 nm to 400 nm.

Claim 12 (Original): The hardening processing apparatus as set forth in claim 6, wherein

the coating film is an insulating film, and the heating processing is low oxygen heating processing of heating the substrate in a low oxygen atmosphere to cause condensation polymerization reaction of the coating film to thereby chemically harden the coating film.

Claim 13 (Cancelled).

Claim 14 (Currently Amended): The hardening processing apparatus as set forth in claim [[8]] 1, wherein

the coating film is an insulating film, and said second irradiation unit irradiates the substrate with the ultraviolet light to thereby perform quality improving processing of the insulating film.

Claims 15-22 (Cancelled).

Claim 23 (New): The hardening processing apparatus as set forth in claim 6, wherein said second irradiation unit irradiates the substrate with the ultraviolet light to thereby perform quality improving processing of the coating film.

Claim 24 (New): A hardening processing apparatus for heating a substrate coated with a coating solution to harden a coating film on the substrate, comprising:

a first processing chamber for mounting the substrate coated with the coating solution on a heating plate which is movable up and down and heating the substrate to a predetermined temperature on a one-by-one basis;

a first irradiation unit provided in said first processing chamber for irradiating the substrate mounted on said heating plate with ultraviolet light;

a sensor for judging deterioration of said first irradiation unit in said first processing chamber;

a controller for raising said heating plate based on a signal from said sensor; and

a second processing chamber connected in a communicating manner to said first processing chamber for mounting the substrate coated with the coating solution on a temperature adjusting plate and adjusting the substrate to a temperature lower than a processing temperature of hardening processing on a one-by-one basis.

Claim 25 (New): The hardening processing apparatus as set forth in claim 24, further comprising:

a control section for performing, in said first processing chamber:

heating processing of mounting the substrate coated with the coating solution on said heating plate and heating the substrate at a first temperature; and

hardening processing of subsequently heating the substrate for which the heating processing has been performed, kept mounted on said heating plate at a temperature of the hardening processing that is higher than the first temperature, and irradiating the substrate with the ultraviolet light to harden the coating film on the substrate.

Claim 26 (New): The hardening processing apparatus as set forth in claim 24, further comprising:

a control section for performing:

heating processing of mounting the substrate coated with the coating solution on said temperature adjusting plate and heating the substrate at a first temperature in said second processing chamber; and

hardening processing of mounting the substrate, for which the heating processing has been performed, on said heating plate and heating the substrate at a temperature of the hardening processing that is higher than the first temperature and irradiating the substrate

with the ultraviolet light to harden the coating film on the substrate in said first processing chamber.

Claim 27 (New): The hardening processing apparatus as set forth in claim 24, wherein the coating film is an insulating film and the ultraviolet light applied from said first irradiation unit to the substrate is ultraviolet light having a wavelength of 300 nm to 400 nm.

Claim 28 (New): The hardening processing apparatus as set forth in claim 25, wherein the coating film is an insulating film and the heating processing is low oxygen heating processing of heating the substrate in a low oxygen atmosphere to cause condensation polymerization reaction of the coating film to thereby chemically harden the coating film.

Claim 29 (New): The hardening processing apparatus as set forth in claim 26, wherein said temperature adjusting plate is movable between a position above said heating plate in said first processing chamber and said second processing chamber, and

after the temperature adjusting plate, on which the substrate for which the heating processing at the first temperature has been performed is mounted, is positioned above a heating plate, a raising and lowering member is raised so that the substrate is transferred from said heating plate to said temperature adjusting plate, said temperature adjusting plate moving to an outside of the heating plate, and subsequently the raising and lowering member is lowered so that the substrate is transferred from said temperature adjusting plate to said heating plate.

Claim 30 (New): The hardening processing apparatus as set forth in claim 29, further comprising:

a second irradiation unit for irradiating the substrate with the hardened coating film, with ultraviolet light having a wavelength different from that of said first irradiation unit, and said second irradiation unit irradiates the substrate with the ultraviolet light to thereby perform quality improving processing of the coating film.

Claim 31 (New): A hardening processing apparatus for heating a substrate coated with a coating solution to harden a coating film on the substrate, comprising:

a first processing chamber for mounting the substrate coated with the coating solution on a heating plate and heating the substrate to a predetermined temperature on a one-by-one basis;

a first irradiation unit provided in said first processing chamber for irradiating the substrate mounted on said heating plate with ultraviolet light;

a second processing chamber connected in a communicating manner to said first processing chamber for mounting the substrate coated with the coating solution on a temperature adjusting plate and adjusting the substrate to a temperature lower than a processing temperature of hardening processing on a one-by-one basis,

said first irradiation unit is capable of applying ultraviolet lights having two different wavelengths, and said first irradiation unit is movable between said first processing chamber and said second processing chamber.